

PI 3-kinase C2 γ (K-15): sc-48633

BACKGROUND

Phosphoinositide 3-kinase activity is implicated in assorted cellular responses activated by mammalian cell surface receptors and the regulation of protein sorting in yeast. The p110 γ (PIK3CG) enzyme is activated *in vitro* by both the α and β subunits of heterotrimeric GTP-binding proteins (G proteins) and does not associate with a p85 adaptor molecule. PI 3-kinase C2 γ , also designated p110 γ , may link signaling through G protein-coupled receptors to the generation of phosphoinositide second messengers that are phosphorylated in the D-3 position. The PI 3-kinase C2 γ gene encodes a 1,050 amino acid polypeptide with 36% identity to human PI 3-kinase C2 α . Research indicates that PI 3-kinase C2 γ can block the growth of human colon cancer cells.

REFERENCES

1. Stoyanov, B., et al. 1995. Cloning and characterization of a G protein-activated human phospho-inositide 3-kinase. *Science* 269: 690-693.
2. Sasaki, T., et al. 2000. Colorectal carcinomas in mice lacking the catalytic subunit of PI3K γ . *Nature* 406: 897-902.
3. Sasaki, T., et al. 2000. Function of PI3K γ in thymocyte development, T cell activation, and neutrophil migration. *Science* 287: 1040-1046.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601232. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Barber, D.F., et al. 2005. PI3K γ inhibition blocks glomerulonephritis and extends lifespan in a mouse model of systemic lupus. *Nat. Med.* 11: 933-935.

CHROMOSOMAL LOCATION

Genetic locus: PIK3C2G (human) mapping to 12p12.3; Pik3c2g (mouse) mapping to 6 G2.

SOURCE

PI 3-kinase C2 γ (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PI 3-kinase C2 γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48633 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

PI 3-kinase C2 γ (K-15) is recommended for detection of PI 3-kinase C2 γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PI 3-kinase C2 γ (K-15) is also recommended for detection of PI 3-kinase C2 γ in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PI 3-kinase C2 γ siRNA (h): sc-61338, PI 3-kinase C2 γ siRNA (m): sc-61339, PI 3-kinase C2 γ shRNA Plasmid (h): sc-61338-SH, PI 3-kinase C2 γ shRNA Plasmid (m): sc-61339-SH, PI 3-kinase C2 γ shRNA (h) Lentiviral Particles: sc-61338-V and PI 3-kinase C2 γ shRNA (m) Lentiviral Particles: sc-61339-V.

Molecular Weight of PI 3-kinase C2 γ : 120 kDa.

Positive Controls: rat brain extract: sc-2392 or ECV304 cell lysate: sc-2269.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Nagini, S., et al. 2012. Chlorophyllin abrogates canonical Wnt/ β -catenin signaling pathway and angiogenesis to inhibit the development of DMBA-induced hamster cheek pouch carcinomas. *Cell. Oncol.* 35: 385-395.
2. Kavitha, K., et al. 2013. Astaxanthin inhibits NF κ B and Wnt/ β -catenin signaling pathways via inactivation of Erk/MAPK and PI3K/Akt to induce intrinsic apoptosis in a hamster model of oral cancer. *Biochim. Biophys. Acta* 1830: 4433-4444.
3. Kowshik, J., et al. 2014. Ellagic acid inhibits VEGF/VEGFR2, PI3K/Akt and MAPK signaling cascades in the hamster cheek pouch carcinogenesis model. *Anticancer Agents Med. Chem.* 14: 1249-1260.

RESEARCH USE

For research use only, not for use in diagnostic procedures.


 MONOS
 Satisfaction
 Guaranteed

Try **PI 3-kinase C2 γ (3D8): sc-517028**, our highly recommended monoclonal alternative to PI 3-kinase C2 γ (K-15).